

4G Industrial Router for Smart Elevator Monitoring & Safety

Overview

A **4G Industrial Router** enables **real-time remote monitoring, emergency communication, and predictive maintenance** for elevator systems. By connecting sensors, cameras, control panels, and emergency devices, it ensures **secure, reliable data transmission** over 4G networks, improving safety and operational efficiency.

Challenge

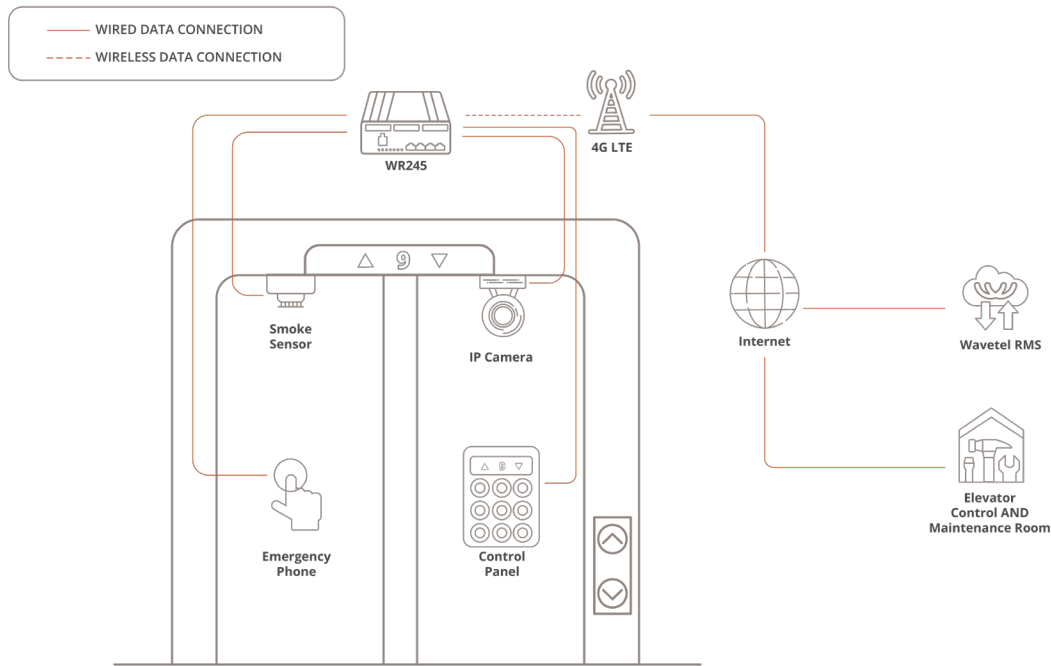
1. **Connectivity Issues** – Elevators in remote or underground locations may suffer from **poor/no network coverage**, leading to delayed alerts.
2. **Multi-Device Integration** – Traditional systems struggle to support **diverse interfaces** (RS485, DI/DO, Ethernet, Wi-Fi) in a single network.
3. **Safety & Compliance Risks** – Lack of real-time monitoring increases the risk of **stranded passengers, undetected malfunctions, or delayed emergency response**.
4. **High Maintenance Costs** – Manual inspections and reactive repairs lead to **downtime and increased operational costs**.

Solution

Deploy a Wavetel **4G Industrial Router WR245** with:

- ✓ **Dual SIM 4G Failover** – Ensures **uninterrupted connectivity** even if one carrier fails.
- ✓ **Multi-Interface Support** – Connects **sensors (RS232/RS485/DI), cameras (RJ45/Wi-Fi), emergency phones, and control panels**.
- ✓ **Real-Time Alerts** – Instant cloud notifications for **mechanical failures, power outages, or emergency calls**.
- ✓ **Secure Remote Access** – Encrypted VPN for safe data transmission to cloud servers.

Topology



Benefits

- ✓ **24/7 Elevator Monitoring** – Immediate detection of faults, reducing downtime.
- ✓ **Enhanced Passenger Safety** – Emergency calls & live camera feeds enable faster rescue.
- ✓ **Lower Maintenance Costs** – Predictive alerts reduce manual inspections.
- ✓ **Future-Proof IoT Ready** – Scalable for smart building integrations

Implementation

1. Hardware Setup

- Install the **4G Industrial Router** inside the elevator control cabinet.
- Connect **sensors (vibration, door status, speed)** via **RS485/DI**.
- Link **cameras & emergency phones** via **Ethernet/Wi-Fi**.

2. Remote Management

- Technicians access data via web/mobile for **diagnostics & over-the-air updates**.

Why Us?

- **Reliable Connectivity** – Dual SIM failover ensures **zero downtime**.
- **Industrial-Grade Durability** – Works in harsh environments (-30°C to 70°C).
- **Flexible Deployment** – Supports **Wi-Fi, Ethernet, serial, and IoT protocols**.
- **End-to-End Security** – Built-in firewall, VPN, and encryption.
- **Proven in Critical Applications** – Trusted in **smart cities, industrial IoT, and transportation**.

